Chapter 4 MOBILITY

The City of Long Beach is undertaking the preparation of an update to its existing Transportation Element of the Long Beach General Plan, which was adopted by the City Council in December 1991. The Land Use Element of the General Plan is being updated simultaneously. The new Transportation Element is being called a Mobility Element, as it is intended to address all modes of transportation, including pedestrians and transit, in addition to automobile travel on roadways. One of the primary purposes of the Mobility Element is to provide a transportation system that will accommodate the build out of the land uses in the City, as reflected in the Land Use Element. The analysis of build out of the Land Use Element will be conducted in the context of 2025 regional growth and travel forecasts developed by the Southern California Association of Governments (SCAG). This baseline transportation report is intended to provide an overview of existing transportation conditions in the City of Long Beach and to provide the setting in which future developments will be considered. The existing transportation conditions will likely influence the policy choices regarding changes in land uses and the types of transportation programs that can accommodate those land uses.

4.1 THE HIGHWAY NETWORK

4.1.1 Roadway Network

The City is well served by the regional freeway network. The I-710 (Long Beach Freeway) and I-605 (San Gabriel River Freeway) connect the City to points to the north. The SR-91 (Artesia Freeway) and I-405 (San Diego Freeway) link the City to points east and west, with the I-405 also extending south to Orange County and north to the San Fernando Valley. Figure 4.1-1 illustrates the general location of the City and its major roadway network in relation to the surrounding communities.

4.1.2 Functional Classification of Streets

The Transportation Element of the Long Beach General Plan, adopted in December 1991, establishes the intended function of the streets in the City. The functional classification policy provides guidelines as to the kinds of traffic and transit that should use each street type and how physical improvements should be designed. The functional classification creates a hierarchy of street types, which range from freeways to local streets. The classifications tend to range from those that have the highest capacity and least amount of access (controlled access) to those with the lowest capacity, slowest speed and greatest amount of access to fronting properties. The classifications vary in the amount of through traffic the streets are meant to accommodate as well as the types and intensity of land use that should be developed along them.

The Long Beach Functional Classification of Streets includes the following categories:

- Freeway
- Regional Corridor
- Major Arterial
- Minor Arterial
- Collector Street
- Local Street

The description of each of these types of street classifications is included in Table 4.1-1. Figure 4.1-2 illustrates the functional classifications of streets in Long Beach.

4.1.3 Average Daily Traffic Volumes

Traffic congestion typically occurs on arterial streets during the peak hours at intersections, where detailed intersection level of service analysis is conducted to determine the need for additional turn lanes or traffic signal improvements. This level of analysis is discussed in the next section of this report. The first basic step in assessing a Citywide transportation network, however, is generally to look at the total average daily traffic volumes (ADT) and peak period volumes on segments (links) of roadways. This provides an indicator as to whether a roadway needs to include multiple lanes over its length or just one lane in each direction. Figure 4.1-3 illustrates existing average daily traffic volumes on roadways in the City.

There tend to be more higher-volume streets in the east/west direction than the north/south direction. Streets with volumes in excess of 50,000 vehicles per day include the following:

- Ocean Boulevard, in the Harbor District
- Seventh Street, near the I-710 and east of Pacific Coast Highway (PCH)
- PCH, south of the Traffic Circle

The volumes on each of the freeways passing through Long Beach are also very high and the freeways experience extended peak periods with congestion, which leads to some long-distance traffic utilizing parallel City streets to avoid the freeway congestion. Table 4.1-2 below illustrates current traffic volumes on the freeways in Long Beach.

Table 4.1-2 Freeway Daily Traffic Volumes: 1988–2001 (in thousands)

	1988		*2001*	
	Minimum	*Maximum*	*Minimum*	*Maximum*
Artesia (Rte 91)	204	220	210	263
Long Beach (I-710)	94	153	133	186
San Diego (I-405)	214	242	255	289
San Gabriel River (I-605)	161	173	190	213
Garden Grove (Rte 22)	50	65	65	97

SOURCE: Caltrans

The volumes listed show the minimum and maximum volumes on the freeway segments within the city limits. The volumes from 1988, when the Mobility Element was last updated, are provided for comparison purposes. Traffic volumes on all of the freeways in Long Beach have grown significantly, on average about 20 percent, over the last 13 years.

As part of the Mobility Element update process, a travel demand forecasting tool using the emme/2 software has been developed by Kaku Associates, a subconsultant to Meyer, Mohaddes Associates. The travel demand forecasting model reflects existing conditions and will be used to project future 2025 traffic conditions with the Land Use Element alternatives. The model forecasts peak period and daily volumes and compares them to the capacity of the roadway segment (links) in the model to identify capacity deficiencies. A volume-to-capacity plot is illustrated in Figure 4.1-4 showing in red where traffic volumes exceed the capacity of the links. [Note: This plot is an example of the type of plot that will be included in the Baseline Report when the updated City of Long Beach travel forecasting model is complete. This version is from the 1991 Transportation Element.]

4.1.4 Study Intersections

MMA has collected data on over 140 signalized intersections in the City of Long Beach. Figures 4.1-5 and 4.1-6 illustrate the highest volume intersections in the City in the AM and PM peak hours, respectively. There are 28 intersections in the City which handle over 5,000 vehicles per hour in the PM peak hour, compared to only 9 in the AM peak hour. Similarly, there are 37 intersections with volumes between 4,000 and 4,999 vehicles per hour in the PM, but only 27 in the AM peak hour. The intersection with the highest total volume in both peak hours is the intersection of PCH/7th Street, with over 7,000 vehicles per hour in both peak hours. The locations of the highest volume

intersections are distributed throughout the City, generally on the Regional/Major arterial streets with concentrations on Long Beach Boulevard, Atlantic, Lakewood, and Bellflower Boulevards in the north/south direction, and Artesia, Del Amo, Carson, Wardlow, Spring, Willow, and PCH in the east/west direction. Few of the very high-volume intersections are located in the downtown or beachfront areas.

The analysis of land use alternatives to be conducted in subsequent tasks of the Land Use and Mobility Element update process will assess the implications of the alternatives on the transportation network using the travel demand forecasting model, which focuses on link level of service analysis. The impacts of the alternatives will also be assessed on a sample of intersections at key locations throughout the City. Figure 4.1-7 illustrates the locations of those 50 study intersections and their current operating conditions.

4.1.5 Locations of Capacity Constraints

Members of the Community Cluster Committees were asked to identify areas of the City that they perceive to be areas of congestion. Figure 4.1-8 illustrates the responses that were received. The committee members perceived that congestion typically occurs along many of the Regional and Major Arterials in the City, including the following:

- Santa Fe Avenue
- Long Beach Boulevard
- Atlantic Boulevard
- Bellflower Boulevard
- Studebaker Road
- Artesia Boulevard
- Willow Street
- Pacific Coast Highway
- Anaheim Street
- Seventh Street

A limited number of Minor Arterial or Collector streets were perceived to be congested, including the following:

- Orange Avenue
- Clark Avenue
- Second Street
- Ocean Boulevard

The locations of congested intersections are scattered throughout the City on these corridors, as illustrated in Figure 4.1-8.

4.1.6 Signal System/ITS

The City of Long Beach currently has almost 600 signalized intersections within the City, of which, approximately 325 are interconnected and communicate with the Traffic Management Center (TMC) located at 1601 San Francisco Avenue. The Traffic Transportation Bureau (T&T) operates and maintains the communications system that connects the TMC to the local signalized intersections and closed circuit television (CCTV) cameras currently deployed within the City. T&T uses mainly three types of communication media throughout the City for communication with the signalized intersections. Twisted-pair copper cables make up the majority of the communication infrastructure and are deployed along several of the major and minor arterials throughout the City. The City typically installs 12 pair, 19AWG cable in 2-inch conduit, and No. 5 pull boxes spaced at approximately 200 feet increments. However, there some older installations where either 6- or 7-wire interconnect remains in use.

The City also makes use of radio and microwave wireless media, and leased telephone dial-up links to signalized intersections, which are not easily connected to hardwire due to distance or geographic limitations. The 900 MHz radio intersections mainly serve as system master locations with twisted pair copper cable feeding out to the signalized intersections within the immediate vicinity. Some 31 GHz microwave links and dial-up modems are also used to tie-in signalized intersections to the overall operations.

In addition to the operation of signalized intersections, T&T also utilizes twisted pair copper cables to transmit video signals from the deployed CCTV cameras to the TMC. The transmission of video via twisted pair utilizes two pair of cables per location and requires amplification at approximately one-mile intervals. The City currently has CCTV cameras installed at the intersections of Pacific Coast Highway/Long Beach Boulevard and 1st Street/Pacific Street. There are two additional CCTV cameras installed at the City Maintenance Yard mainly used for security purposes.

Currently, the head-end location for all T&T communications is the existing TMC. Within this facility there is a BI Tran QuicNet/4 signal control system used to operate and monitor the signalized intersections as well as video monitors and switching equipment used for CCTV camera operation.

Figure 4.1-9 provides a graphical representation of the locations of traffic signals and other Intelligent Transportation System (ITS) elements.

Electric Vehicle Charging Stations

In order to promote alternative fuel vehicles and improve air quality in the region, the City of Long Beach encourages the installation of electric vehicle charging stations. These include dedicated parking stalls for electric-powered vehicles where they can plug in to chargers. There are currently six electric vehicle charging stations in the City, located at the following locations:

- Hyatt Long Beach Hotel
- Long Beach Aquarium
- Long Beach Convention Center
- Long Beach Hilton Hotel
- Texaco Star Market at 1719 Palo Verde
- LADWP Haynes Power Plant

Four out of the six locations are in downtown Long Beach.

4.1.7 Planned Improvements

The 1991 Transportation Element identified a number of transportation improvements that were proposed to accommodate the build out of the City's Land Use Element at that time. These improvements included a number of intersection improvements, parking prohibitions to gain travel lanes during peak hours on several streets, a limited number of street widening projects, several grade separations at critical intersections, and the addition of carpool lanes to all of the freeways in the City. Figure 4.1-10 illustrates the previously recommended improvement projects. Many of these same types of improvements will be considered in this Mobility Element as future land use scenarios are evaluated.

Planning is currently underway for improvements on the I-710 freeway. The recent planning efforts have focused on adding high-occupancy-vehicle (HOV) lanes and separate truck lanes to the Long Beach Freeway. The initial planning effort identified alternatives that resulted in the loss of a large number of dwelling units in the City of Long Beach. A subsequent planning effort is now underway to identify an alternative acceptable to the City. A major public outreach effort is underway to identify the preferred scenario that minimizes right of way impacts.

The City implements transportation improvements through its Capital Improvement Program (CIP), which funds all infrastructure improvements overseen by the Public Works Department. Sources of transportation funds for the CIP program include the Los Angeles County sales tax initiatives, Proposition "A" and "C," State Gas Tax Street Improvement funds, Federal TEA-21 Surface Transportation Program funds, the City's Traffic Mitigation Fund, and other specialized funding sources. The allocation of CIP funds to transportation projects and other types of physical infrastructure in the City over the next five years is shown in Table 4.1-3 below.

Table 4.1-3 2005-2009 Capital Improvement Program Work Plan ($1,000,000s)

Type of Project	*FY 2005*	*FY 2006*	*FY 2007*	*FY 2008*	*FY 2009*
Streets & Transportation Enhancements	$17.887	$17.953	$18.824	$19.737	$15.414
Other Physical Improvements	$65.308	$26.402	$37.101	$56.265	$16.604
Total	***$83.195***	***$44.355***	***$55.925***	***$76.002***	***$32.018***

SOURCE: City of Long Beach, Fiscal Year 2004 Capital Improvement Program

The CIP includes funding for such programs as street improvements and rehabilitation/repair, traffic signals, bicycle facilities, street trees, and sidewalk repair. Other categories of CIP projects include the airport, storm drains, marinas, beaches and waterways, parks and recreation, and physical facilities (e.g., city building, police, and fire facilities). Funding for major improvements on the freeway system typically comes from state and federal resources, with some local matching funds.

4.2 NEIGHBORHOODS

4.2.1 Areas of Neighborhood Traffic Intrusion

When traffic becomes congested on the arterial street system, many drivers look for alternate routes on parallel streets, which are often residential streets. Traffic intrusion onto residential streets negatively affects the quality of life on those streets as the traffic often travels at higher speeds than appropriate for residential streets, since this “cut through” traffic is generally traveling longer distances and should be on the arterial street system. In a city such as Long Beach, with largely a grid system of roadways, it is easy for motorists to find alternate routes through residential neighborhoods when the arterials become congested.

In the Community Cluster Workshops, the Cluster Committee members identified the streets in Long Beach that they perceived to have traffic volumes or speeds that were too high, where traffic calming might be appropriate, or where through traffic was utilizing residential streets to avoid congested arterials. Figure 4.2-1 illustrates the streets with negative traffic conditions associated with speed or volume. They are distributed throughout the City, but the highest concentrations of local streets identified as cut through routes was in the area south of downtown going toward Belmont Shore and in neighborhoods parallel to the Long Beach Freeway. In other areas of the City, the cut through routes were fairly isolated streets, rather than whole neighborhoods. Many collector streets and arterial streets are perceived to have traffic speeds that are higher than desirable throughout the City.

The City strives to minimize cut through traffic on residential streets in two ways, (1) manage traffic flow on the arterial streets to reduce congestion and the resulting temptation for drivers to seek alternate routes, and (2) in areas where traffic intrusion is

occurring in neighborhoods, implement measures to prevent the intrusion or to slow ("calm") the traffic on residential streets experiencing cut through traffic.

In 1993, the City initiated a neighborhood traffic management study that addressed traffic conditions in 23 neighborhoods within the City. Four of the neighborhoods were located in North Long Beach, four in West-Central, eight in Southwest, three in Southeast and four in the Eastside. A series of community meetings were held in each area to identify the types and causes of traffic management issues. Potential traffic management measures were developed for each neighborhood and recommended to the City Council. The City has been implementing the measures over time as funding permits.

4.2.2 Neighborhood Traffic Management Plan

The City of Long Beach does not have a formal neighborhood traffic management program, but the City Transportation Department addresses neighborhood traffic issues on a case-by-case basis. Some of the techniques that have been used to calm traffic in neighborhoods include the following:

- Measures to Control Speed
  - Reduction in Number of Through Lanes
  - Reduce Travel Way Width (e.g., with angel parking or chokers)
  - Signage
  - Design Features (e.g., speed humps, traffic circles)
- Measures to Reduce Through Traffic
  - Turn Restrictions
  - Metering (e.g., signal timing or phasing)
  - Design Features (e.g., diverters, semi-diverters, cul-de-sacs)

The development of neighborhood traffic management plans requires careful analysis of each individual neighborhood to understand the causes of the traffic issues and to insure that the problem is not transferred from one neighborhood to an adjacent one.

Special Events

One of the things that makes Long Beach an interesting and unique place is the large number of special events that occur in the City. These include events such as the Long Beach Grand Prix, parades (Christmas, Martin Luther King Day, Gay Pride, etc.), the Long Beach Marathon, and Long Beach Car Show. Such events result in unique challenges for traffic and parking management because they entail temporary street closures, detours, and nonrecurrent congestion. They can make it difficult for residents to access some neighborhoods. The City Public Works and Police Department staffs attempt to coordinate traffic control during special events to minimize disruption to neighborhoods.

4.3 PUBLIC TRANSPORTATION

Public Transportation is provided by several transit operators. Long Beach Transit is the primary provider of fixed-route bus transit service in the City of Long Beach. The Los Angeles County Metropolitan Transportation Authority (MTA) operates both bus transit and the Metro Blue Line light rail service. Orange County Transportation Authority (OCTA), Torrance Transit, and the Commuter Express operated by the City of Los Angeles Department of Transportation (LADOT) also link the City to adjacent communities with bus service.

4.3.1 Long Beach Transit

The Long Beach Public Transportation Company, generally know as Long Beach Transit (LBT), is a public nonprofit corporation established in 1963 to provide public transportation service to the City of Long Beach and neighboring cities. LBT annually serves more than 25 million boarding passengers, making it the largest municipal operator in Los Angeles County. The 98-square-mile service area of LBT is bounded by the Glenn Anderson Freeway (I-105) to the north, the San Gabriel Valley Freeway (I-605), and the Orange County line to the east, the Pacific Ocean to the south, and the Terminal Island Freeway (CA 47) to the west.

LBT operates 38 fixed routes, several limited stop (Zap Super Service) routes, fixed-route circulators (Passport, Link), demand-responsive (Dial-A-Lift) paratransit, and water transit (AquaLink, Aquabus) service.

Fixed-route service is provided with a fleet of 221 buses on the 38 routes. Figure 4.3-1 illustrates the fixed route service. Serviced is operated over the fixed-route system seven days a week from 4:40 AM to 1:30 AM. Table 4.3-1 provides a summary of the fixed-route service characteristics. During FY 2003, LBT carried approximately 25,600,000 passengers. Ridership has grown since 1993 at a ten-year average annual rate of 1.4 percent per year. The most heavily traveled route is Number 190, Atlantic Avenue, with over 12,000 daily riders.

The ZAP limited stop service is provided along the 90 Line and Route 61, as the #96 ZAP 7th Street and the #66 ZAP Atlantic. The ZAP service is designed to provide a higher level of service with limited stops and improved travel times. Service is provided Monday through Friday at peak hours only.

Fixed-route circulators operated by LBT include the Passports, the Pine Avenue Link, and the Village Tour D'art. These circulators utilize smaller vehicles to

connect the downtown to nearby activity and cultural areas. The Passports provide free shuttle connections on three routes ("A," "D," and "C") to points of interest such as; the Aquarium of the Pacific, the Queen Mary, Pine Avenue, Shoreline Village, the Pike, the Promenade, the Convention Center, Long Beach Sports Arena, Belmont Shore, Alamitos Bay, CSULB, Catalina Landing, hotels, businesses and government centers. The Pine Avenue Link connects the downtown to the beach front Convention Center, Pike, Aquarium, Marina, and Shoreline Village. The Village Tour D'art operates on two routes, east, and west of Pine Avenue, providing connections to cultural activities, such as museums, churches, parks, shops, and galleries.

Table 4.3-1 Long Beach Transit Fixed Route Line Characteristics

Route No.	*Name*	*Peak Headway (min)*	*Weekday Boardings*
1	Easy Ave	20	1,829
5	Long Beach Blvd	15	5,984
7	Orange Ave	20	2,554
20	Cherry	15	5,244
Passport	A,C,D, Pine Link	8-24	5,216
35	Tour D'Art	40	100
40	Anaheim	5	8,460
60	Atlantic	10	12,147
80	10th Street	30	859
90	7th Street	12	7,515
100	Carson	15	4,342
110	Broadway	15	3,823
130	Redondo: Seal Beach	30	1,432
170	PCH	15	7,295
171	PCH: Seal Beach	30	1,643
180	4th Street	15	3,617
190	Santa Fe	15	8,685
	Total Fixed Route Bus		***80,745***

SOURCE: Long Beach Transit, Short Range Transit Plan, FY 2004–2008

Ferryboat services are also operated as water-borne circulators. The AquaBus ferry serves the Long Beach Aquarium, Catalina Landing, Coast Hotel, Pine Avenue, Shoreline Village, and the Queen Mary. It is provided by two 49-passenger boats with service seven days per week in the summer months and reduced service levels in the off-peak season. The AquaLink ferry service connects the Queensway Bay area to Alamitos Bay on the east side of the City.

Dial-A-Lift is a contracted demand-responsive paratransit service provided by LBT. The service is provided to those who are physically unable to use the fixed-route system and who have registered as members. Service is provided seven days per week and served 87,000 paratransit customers in FY 2003.

4.3.2 Other Public Bus Transit

Fixed-route transit service connecting Long Beach to adjacent communities is operated by MTA, OCTA, Torrance Transit, and LADOT. Figure 4.3-2 illustrates the routes of these services. MTA primarily provides connections to the north, with several routes extending to the Long Beach Transit Mall in downtown Long Beach. OCTA operates two routes that extend into Long Beach, the OCTA Route 1 along PCH connects CSULB to San Clemente, and OCTA Route 60 along 7th Street connects the downtown Transit Mall with CSULB and downtown Santa Ana and Tustin. Torrance Transit Route 3 connects downtown Long Beach to Torrance. LADOT's Commuter Express #142 connects downtown Long Beach with San Pedro and is operated in the commute peak periods only.

4.3.3 Metro Rail

MTA also provides service on Metro Blue Line, a 22-mile light rail line from downtown Los Angeles to downtown Long Beach. Stations are located approximately one mile apart, although closer in the downtown Long Beach loop. Stations in Long Beach are located at Wardlow Road, Willow Road, Pacific Coast Highway, Anaheim Street, 5th Street, 1st Street, the Transit Mall, and Pacific Avenue. Only the Wardlow and Willow stations include park-and-ride facilities.

The Metro Blue Line provides direct connections to the emerging regional rail system with stations at the Metro Green Line and the Metro Red Line at Metro Center in Downtown Los Angeles. One transfer can take passengers to Union Station where they can access the Metrolink system and the Metro Gold Line to Pasadena.

The Metro Blue Line opened in 1990 and has steadily grown in ridership to reach a daily ridership of 74,400 passengers per day, the busiest light rail line in the Country. The Metro Blue Line carried 22 million passengers in FY 2003. Station platforms were lengthened in 2000 to allow three-car trains to operate on the line to better accommodate the passenger demand.

4.3.4 Transit Mall

The Long Beach Transit Mall is located in downtown Long Beach on 1st Street between Long Beach Boulevard and Pacific Avenue. The Mall serves as the focal point for local,

subregional, and regional transit systems, including 32 of the 38 LBT bus routes, the Metro Blue Line, and Torrance Transit, LADOT and OCTA bus lines.

The Transit Mall includes features designed to make it a transit-friendly location. There are exclusive bus lanes and traffic control equipment, bus stop enhancements, the Blue Line station, kiosks with graphic displays and electronic monitors displaying schedule information, a staffed transit information center, and a bike station (for parking and repair of bicycles).

4.3.5 Planned Improvements

The Short Range Transit Plan for Fiscal Years 2004 through 2008 identifies the improvements that Long Beach Transit anticipates making over the next five years. These include headway modifications, route modifications/realignments to 14 routes to better serve passenger demands and/or new developments in/near the City of Long Beach. In addition, LBT also plans a new airport shuttle service, “Blue to Blue,” between the Long Beach Airport and the Metro Blue line, as well as a new connector, “Air Link,” between the Airport and downtown Long Beach. LBT is also working closely with the MTA to anticipate how potential changes in the MTA route structure could affect LBT and how best to interface potential Metro Rapid Bus service on Long Beach Boulevard.

4.4 OTHER MODES OF TRANSPORTATION

4.4.1 Bicycle Route System

The City adopted the Bicycle Master Plan (BMP) in December 2001 in order to identify bicycle policies, routes, programs, and facility priorities that enable the City to provide an alternative to the single occupancy vehicle. That plan is not being updated as part of the Mobility Element, so the Mobility Element is intended to be consistent with and supportive of the BMP.

The BMP incorporates the bikeways classifications described by Caltrans in Chapter 1000 of the Highway Design Manual as being one of three basic types:

- *Class I Bikeway*—Variously called a bike path or multi-use trail; provides for bicycle travel on a paved right of way completely separated from any street or highway
- *Class II Bikeway*—Referred to as a bike lane; provides a striped lane for one-way travel on a street or highway
- *Class III Bikeway*—Referred to as a bike route; provides for shared use with pedestrian or motor vehicle traffic and is identified only by signage

When the 20-year plan was adopted, it contained specific recommendations that included three distinct components: (1) a bicycle friendly roads and bikeways system, (2) bicycle parking and support facilities, and (3) related safety, education, and community and employer outreach. Short-term projects that were recommended are listed below in order of preference:

- Bicycle Signage Program
- Bicycle Parking Program
- Bicycle Safety Awareness Program
- Downtown–Alamitos Bay Bikeway
- Los Angeles River Access
- Midtown 10th Street Connection
- CSULB
- Alamitos Avenue–Orange
- Second Street Bikeway
- Pacific Avenue–San Antonio Drive Bikeway
- Del Amo Boulevard Bikeway
- Pacific Center Boeing Site
- Harding Street

Figure 4.4-1 illustrates the existing and planned bikeway facilities in the City. Existing bikeways are located along the Los Angeles and San Gabriel Rivers and along the beachfront area. Major on-street bikeways include Pacific Coast Highway, Orange Avenue in North Long Beach, and many streets in the east and southeast section of the City. The planned future bikeways will complete a Citywide network of bikeways.

The first facility of its kind in the U.S., Bikestation Long Beach is a freestanding facility strategically located on the First Street Transit Mall, a nexus for light rail, buses, pedestrians, and a local shuttle that services neighborhoods and key attractions. Nearby, more than 30 miles of dedicated shoreline and river bicycle paths, as well as Class II paths, connect to other parts of the City.

Bikestation Long Beach offers valet parking in a secure area, bike repairs and rentals, a changing room/restroom, and bike accessories shop. Members receive access to vehicle-sharing services including electric bike and scooter rentals at reasonable rates. Flexcar, a car-sharing service, is also located at the facility.

In addition to a refreshment bar with outdoor seating, the facility provides an array of bicycle, transit, and tourist information.

4.4.2 Pedestrian Facilities

Like many other cities in Southern California, Long Beach has varying provisions for pedestrians in its various neighborhoods and districts. Downtown Long Beach and Belmont Shore, two of the city's oldest neighborhoods, were designed with pedestrians in mind. Blocks are laid out in a simple grid pattern, roadways tend to be narrower, and

buildings built up to the street. These areas have sidewalks with adequate width and pedestrian amenities, such as shade trees, pedestrian lighting, benches, special sidewalk paving, etc., throughout their commercial districts. Whereas other neighborhoods, many built following World War II, were designed to be auto-oriented. They have large blocks with limited connections, buildings set back behind large parking lots, very wide roadways with no or very narrow sidewalks, and few pedestrian amenities. As with all modes of transportation, the linkage between the walkability of a neighborhood or district and city planning and land use is critical. How you get from here to there is as important as what is there once you get there.

The older districts are much more walkable than many of the newer districts. The simple grid system of streets and small blocks in the older districts, along with active street-front retail districts and vital residential neighborhoods, allows for easy connections between residential and commercial activity. Residents can easily walk to shops and public transportation in Downtown Long Beach, as well as Belmont Shore and other similar neighborhoods. This ability to walk, as an alternative to driving, helps to reduce the number of vehicle trips generated in these neighborhoods as well as the number of parking spaces required. These neighborhoods tend to be more active and healthy due to the pedestrian activity generated within them.

The situation in the newer auto-oriented neighborhoods is a bit more challenging. The wide roadways in the newer neighborhoods and districts, such as North Long Beach, handle large volumes of vehicles using the City streets as an alternative to the freeway system. Many community members in these districts witness not only large volumes of vehicles, but often times speeding vehicles. Large volumes and speeding vehicles on wide streets create a challenging situation for pedestrians. Wide roadways mean a long distance to cross the street, large volumes of fast moving vehicles often means unsafe conditions for pedestrians. Lack of sidewalks or minimal width sidewalks, means pedestrians must walk in the roadway for all or part of their trip, at great risk to themselves. Large blocks and limited through streets creates a difficult situation for pedestrians who “can’t seem to be able to get there from here” unless they can fly. The grocery store may only be ¼ mile as the crow flies, but is over ¾ mile away using the street system in their neighborhood. Residents often choose driving over walking, if they have the option, because it is simply too far or too inconvenient to walk. They will often use a gallon of gas to buy a pound of bread. Not a very efficient use of our limited energy resources. Buildings set back from the street by a large parking lot make it difficult and dangerous for pedestrians. They are forced to walk through a parking lot, with drivers trying to find a parking space or backing out, to get to the front door of a retail shop or restaurant.

The City of Long Beach has undertaken many streetscape projects to improve the pedestrian orientation of its streets. Projects in North Long Beach and East Village Arts District will allow for greater walkability and more successful retail shopping districts.

Long Beach has the great advantage of having successful pedestrian-oriented districts where it can use the lessons learned of these older districts in preparing strategies and implementation plans for the new less pedestrian-oriented districts. It’s never too late to make a place more walkable.

4.4.3 Accessibility

The Americans with Disabilities Act (ADA) requires that public facilities be made accessible to persons with physical challenges in walking. This includes the placement of ramps or elevators at building entrances and, in the case of the transportation system, curb ramps on sidewalks at cross walks and access assistance to transit vehicles. [**Info on City's ADA compliance program to be provided.**]

4.4.4 People Movers

In addition to pedestrians on sidewalks, these days the users of sidewalks includes people on motorized scooters and Segway people movers, in addition to skateboarders and rollerbladers and skaters. While limited data is available on the number of such users of the sidewalks, in areas where the pedestrian volumes are large or the sidewalks are narrow, there can be conflicts between pedestrians and persons using these types of people movers. Many cities have begun to place restrictions on the use of sidewalks by such modes of transportation.

4.4.5 Travel Statistics

The US Census Bureau collects data with regard to travel patterns of US citizens as part of the census each decade. Table 4.4-1 provides a comparison of Long Beach residents' typical daily work travel patterns in comparison to those of Los Angeles County residents. Long Beach residents exhibit very similar travel patterns to County residents.

Table 4.4-1 Work Travel Characteristics

Travel Mode	*Long Beach Residents*	*Los Angeles Co Residents*
Drive Alone	76%	71%
Carpool	11%	14%
Public Transit	7%	7%
Other Modes	3%	4%
Work At Home	3%	4%
Average Commute Time	***26 minutes***	***28 minute***

4.5 REGIONAL AIRPORT SYSTEM

The southern California region is served by many airports, including the Long Beach Airport. There are 57 public use airports, including six commercial service airports, 45 general aviation, two closed military air bases, two commuter airports, and two joint-use facilities. Approximately 78 million annual passengers (MAP) were served in the region in 2002. In addition, over 2.6 million tons of cargo were moved through the regional

airports. Table 4.5-1 illustrates the passengers and cargo handled at Long Beach Airport in 2002 and 2003 in comparison to other facilities.

Table 4.5-1 Airport Passenger and Cargo Volumes

Airport	2002 Passenger Volume		2003 Passenger Volume		2002 Cargo Volume	
	Million Annual Passenger	Percent of Total	Million Annual Passenger	Percent of Total	Tons of Cargo (1,000s)	Percent of Total
Burbank	4.6	5.9%	4.7	6.0%	43	1.5%
John Wayne	7.9	10.2%	8.5	10.8%	15	0.6%
LAX	56.2	72.2%	54.9	69.8%	1,958	74.7%
Long Beach	**1.4**	**1.8%**	**2.9**	**3.7%**	**58**	**2.2%**
Ontario	6.5	8.4%	6.5	8.3%	547	20.9%
Palm Springs	1.1	1.4%	1.1(2002)	1.4%	0.8	0.03%
Total	***77.8***	***100%***	***78.6***	***100%***	***2,623***	***100%***

SOURCE: 2002 Passenger and Cargo volumes: Southern California Association of Governments, Draft 2004 RTP; 2003 Passenger volumes: Los Angeles Times, January 31, 2004

4.5.1 Long Beach Airport

Long Beach Airport has traditionally handled a small percentage of the regional airport passenger and air cargo demand. It is currently handling about 3.7 percent of the regional air passenger demand, about 2.9 MAP and 2.2 percent of the air cargo demand, 58,000 tons of cargo per year. While this is a small percentage of the regional total, due to the recent introduction of service at the airport by Jet Blue Airlines, the passenger volume has increased from 1.4 MAP in 2002 to the 2.9 MAP level in 2003. The airport is constrained in the number of flights it is permitted to operate daily to 41 commercial flights and 25 commuter flights, so any growth in passenger volume must occur within the limits of this maximum number of daily flights.

Presently, Long Beach Airport covers 1,166 acres and has five runways, the longest being 10,000 feet. It is a hub of corporate activity as well as being one of the world's busiest airports in terms of general aviation activity. Scheduled airlines also provide passenger and cargo service. Long Beach Airport is served by the following Commercial Airlines and Air Cargo Carriers:

- Commercial Airlines: America West Airlines, American Airlines, JetBlue Airways, Horizon Air
- Cargo Airlines: Airborne Express, FedEx, United Parcel Service (UPS)

Currently, there are over 200 businesses located on airport property, including nearly 100 acres of mid-rise business park and hotel uses, several top-rate fixed base operators, and specialty aviation service companies, as well as Cessna Citation and Gulfstream Aerospace aircraft service centers.

4.6 PORT OF LONG BEACH

4.6.1 History and Existing Conditions

The Port of Long Beach is a Department of the City of Long Beach, the Long Beach Harbor Department. The Long Beach Board of Harbor Commissioners, whose five members are appointed by the Mayor and confirmed by the City Council, governs the Harbor District, which includes the Port.

In 1911, the state Legislature approved a Tideland's grant to Long Beach, giving the City the right to manage and develop the Harbor District for commerce, navigation, fisheries, and recreation.

In 1931, the Long Beach City Charter established the boundaries of the Harbor District and created the Harbor Commission to set policy and the Long Beach Harbor Department to carry out those policies. Each year, the City Council approves the Harbor Department's annual budget. The shipping terminal leases are the principal source of revenue for the Long Beach Harbor Department. These Port revenues pay the wages of Harbor Department employees, and they are reinvested in the maintenance and development of Port facilities. The Mobility Element will not address facilities within the Harbor District, which is subject to its own planning process. It will, however, take into consideration the traffic that is generated by the Port, which affects conditions outside the Harbor District.

The Port is a major transportation and trade center, providing the shipping terminals for nearly one-third of the waterborne trade moving through the West Coast. The number of cargo containers shipped through Long Beach combined with that of its separately operated next-door neighbor—the Port of Los Angeles—would rank the San Pedro Bay ports as the world's third busiest container cargo ports after only Hong Kong and Singapore.

Long Beach is the second busiest container seaport in the United States, after only Los Angeles. The two ports are located side-by-side in San Pedro Bay, and operated separately: one by the City of Long Beach and the other by the City of Los Angeles. The two ports compete for business, but have cooperated on joint rail and other infrastructure projects

The Port is improving shipping terminal efficiency by consolidating and reconfiguring existing terminals so there is room for growing cargo volumes. It is investing millions to improve Port roadways and bridges to accommodate growth.

The physical size of the Port however, cannot grow indefinitely. The Harbor District that encompasses the Port will not be expanded beyond its current boundaries.

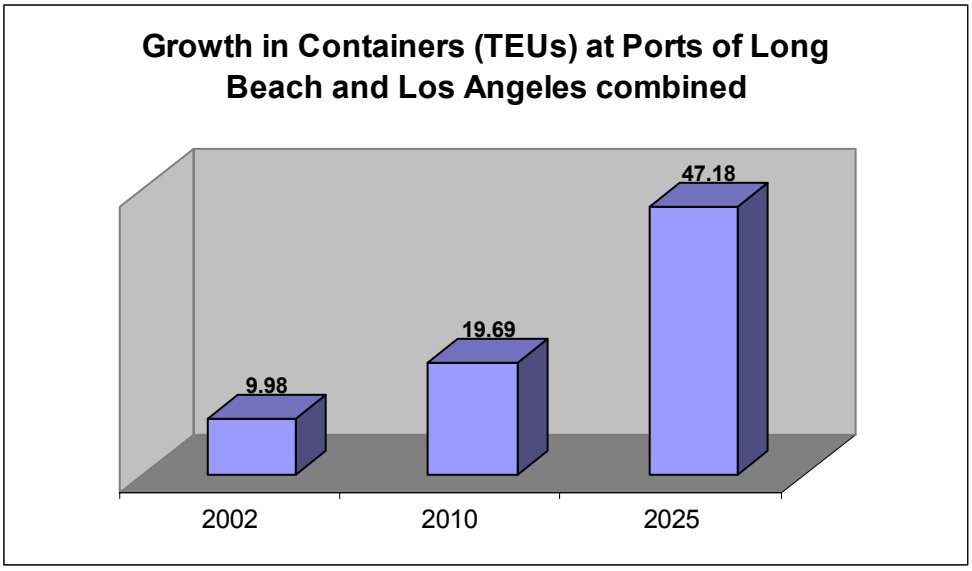
Even growth within the Harbor District is constrained by the practical restraints of today's environmental protection regulations. These limits mean that the physical expansion of Port land within the Harbor District is likely to end within the next two decades.

Cargo growth at the Port of Long Beach is possible as long as consumer demand for imports continues to grow, and as long as the Port can find ways to efficiently use the Port and regional infrastructure to accommodate such growth.

The Port is promoting operational changes such as on-dock transfer facilities, which allow cargo to be transferred from ships to trains within the Port. Long Beach has also been a pioneer in the use of waterfront transfer facilities to eliminate thousands of truck trips each day from the highway network, the I-710 Freeway in particular.

Roughly 25 percent of all Port cargo moves to and from the waterfront via the newly opened Alameda Corridor freight rail expressway. The Corridor also eliminated 200 street-level railroad crossings that delayed motorists in communities throughout Southeast Los Angeles County.

As Southern California's population and economy grows, so will truck traffic. As illustrated in Bar chart below, the volume of containers (expressed as 20-foot equivalent units, TEUs) handled at the combined Long beach and Los Angeles Ports will increase from 9.98 million annually in 2002 to 47.18 million in 2025, a more than four-fold increase.



SOURCE: Meyer, Mohaddes Associates, Inc., 2004

Figure 4.6-1 Growth in Containers (TEUs) at Ports of Long Beach and Los Angeles Combined

The Port is encouraging more efficient use of the existing freeway network by sponsoring truck appointment systems to spread traffic flow throughout the day. The Port is also urging importers and exporters to operate at night and during weekends when freeways are less congested. Currently the Port's privately operated container cargo terminals operate around the clock to work ships at berth. The terminal truck's gates typically open from 7 A.M. to 5 P.M. weekdays because that's when importers, exporters, and warehouses are open for business. As importers, exporters and warehouses expand their hours of operation, so will shipping terminals. But the shift to 24/7 operations may take several years.

4.6.2 Planned Improvements

Numerous transportation infrastructure improvements are planned within the ports area, which include terminal improvements, rail improvements, gate operations, traffic management strategies, and roadway improvements. The Port prepares and implements its own Transportation Master Plan independently of the City's Mobility Element. One of the most significant infrastructure improvements in the Port area that will effect the roadway network is the plan to eliminate all of the traffic signals along Ocean Boulevard through the development of grade separations (e.g., at the Route 47/Ocean Boulevard intersection) so that in the future it will be possible to travel from the 710 freeway to the 110 freeway without stopping at a traffic signal. At the Route 47/Ocean intersection, a "split diamond" interchange will be constructed, which will consist of a grade separation of Ocean Boulevard at Henry Ford Way and the Terminal Island Freeway, with a combined ramp and one-way frontage road system to provide for turning movements and local access. Also, as part of this project, Ocean Boulevard and the easterly ramps will be elevated east of the terminal Island Freeway to provide an undercrossing between Pier S and Pier T. This will allow containers from Pier S to be transported to the Pier T rail yard without having to cross Ocean Boulevard at-grade.

4.7 TRUCK TRANSPORTATION

4.7.1 Existing Truck Route System

The existing truck route system is illustrated in Figure 4.7-1. Truck movements are regulated by the California Vehicle Code and local ordinances establishing truck routes. Truck routes are established to identify which routes are to be used for trucks for through movements in the City. Other streets may be used, but only for specific delivery purposes, not through movements. Generally truck routes are on major arterials, which are intended to carry through traffic movements. Some major arterials may be located adjacent to residential land uses and thereby not be compatible for designation as a truck route.

The primary north/south truck routes in the City include Long Beach Boulevard, Cherry Avenue, Lakewood Boulevard, and Bellflower Boulevard. Major east/west truck routes include Carson Street, Spring Street, Willow Street (between I-710 and I-405), and Pacific Coast Highway.

4.7.2 Truck Volumes on Streets

There is limited truck count data available on City streets, but studies have been conducted in the ports areas to quantify the number of truck trips in and out of each terminal and to collect data on their origins and destinations. Figure 4.7-2 illustrates the forecast distribution of existing ports-related trucks from both Ports of Long Beach and

Los Angeles on the regional transportation network. The Long Beach Freeway carries the highest volume of truck trips, carrying over 25,000 trucks per day, south of the I-405.

4.8 RAILROAD SERVICE

4.8.1 Railroad Lines

Railroad service in the City of Long Beach is focused on the Port of Long Beach. Service to the Port is provided by both of the Class 1 railroads operating in the southern California region: the Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF). Both railroads access the Port through the Alameda Corridor, a grade-separated rail corridor that opened in April 2002. It connects the Ports of Long Beach and Los Angeles to rail yards in/near downtown Los Angeles and allowed for consolidation of rail service in this one corridor. As a result, service on the former UP San Pedro branch through central Long Beach has been eliminated. Similarly, the former ATSF Harbor District line from the ports to downtown via Torrance and other Westside cities is no longer used for Port-related train traffic.

4.8.2 Level of Train Activity

[**To be provided**]

4.9 LOCATIONS OF MAJOR PIPELINES

Pipelines are addressed in a Mobility Element, when applicable, because they are a means of transporting materials through a city in lieu of trucking the goods. Because of the ongoing refining and extraction activities in and near the City of Long Beach, there are a number of major oil and natural gas pipelines that traverse the City. Figure 4.9-1 illustrates the locations of the major pipeline facilities.

A new pipeline facility may be required in the future if the Liquified Natural Gas terminal is developed in the Port area in order to connect it to the City corporation yard.

4.10 PARKING

4.10.1 On-Street Parking

Metered parking is available in Downtown, in Belmont Shore, in beach lots, and at the Long Beach Airport. Parking meter districts are specified in the Long Beach Municipal Code.

Several high-density residential areas of the City have on-street parking shortages due to either overflow of parking demand from adjacent commercial areas or the limited

amount of parking provided at some of the older apartment complexes in the City. Figure 4.10-1 illustrates the areas of the City that have been designated as “parking impacted” areas.

Peak hour parking restrictions are often implemented to provide additional capacity along an arterial roadway. The prohibition of peak period parking can increase the capacity of the roadway by removing the side friction of cars being parked and unparked, or by creating an additional travel lane during the peak period(s). The City has implemented peak period parking restrictions where additional capacity is needed to reduce congestion. Examples include Pacific Coast Highway, Alamitos Avenue, and Willow Street. The 1991 Transportation Element recommended that peak period parking restrictions also be implemented on the following streets:

- Ocean Boulevard, west of Alamitos
- Broadway, west of Alamitos
- 3rd Street, west of Alamitos
- ·6th Street, west of Alamitos
- 7th Street
- Anaheim Street
- Atlantic Avenue, Ocean to 10th Street
- Cherry Avenue, Spring to Carson
- Clark Avenue, Willow to north of Conant
- Los Coyotes Diagonal

The City has implemented diagonal parking on some roadways to increase the number of parking spaces on blocks where parking demand is high and the roadway width is not needed for travel lanes. Diagonal parking was also implemented in the Bixby Knolls shopping area on Atlantic Boulevard to increase parking and slow (“traffic calm”) the traffic in the shopping area. It has not been widely accepted and will be removed and replaced with parallel parking and the installation of a standard median island instead. Recently, a demonstration program for motorcycle parking has been implemented in Alamitos Beach. The program is designed to prevent motorcycles from being parked in standard marked parking spaces mid-block and to provide dedicated parking areas for motorcycles close to the intersections at the ends of the blocks.

4.10.2 Preferential Parking Districts

The City has enacted a section of its Municipal Code to create preferential parking districts to alleviate serious problems in certain residential areas of the City. The parking problems in residential areas are due, in part, to the misuse or lack of available off street parking, the parking of motor vehicles on streets by nonresidents of the neighborhoods for extended periods of time, and insufficient use of public transit alternatives to automobile travel, resulting in neighborhood decline by reason of traffic congestion, noise, air pollution, traffic hazards, and inability of residents to park their motor vehicles near their residences.

There are 26 preferential parking districts in the City concentrated around CSU Long Beach, City College, Brooks College, and the community theaters on Anaheim Street.

The preferential parking districts are evaluated in response to petitions from residents. Following the receipt of the petition, and following the public hearing, the City Council shall determine if the district is to be designated for preferential parking. That determination shall be based upon, but not limited to, substantial compliance with the following guidelines:

1. *High demand*. More than 75 percent of on-street spaces are occupied during period proposed for parking restriction or prohibition. In cases where a time limit parking restriction or parking prohibition is already in place, the city traffic engineer shall use reasonable judgment as to whether the demand criteria would likely be met without the restriction or prohibition; and

2. *Self-contained area*. The district, alone or in combination with other existing or potential preferential parking districts, constitutes a reasonably self-contained area of parking demand and supply. The city traffic engineer shall make the determination of a reasonably self-contained area, utilizing boundaries such as major streets, nonresidential land uses, edges of higher or lower density residential areas, water bodies and other natural features; and utilizing surveys of existing conditions to determine extent of area impacted by nonresident parking. The city traffic engineer shall designate each such self-contained preferential parking district with a unique letter or combination of letters, which shall be the official designation of said district. The purpose of this designation process is to ensure that proposed preferential parking districts are of sufficient size as to reasonably encompass the problem area and to offer sufficient on street parking spaces to provide reasonable opportunity for residents to obtain parking.

3. If the district is proposed solely for daytime preferential parking, the following guidelines shall apply:

   Nonresidential users. More than 50 percent of vehicles parked at curbside during the period proposed for parking restriction or prohibition are owned by nonresidents of the district. In cases where a time limit parking restriction or prohibition is already in place, the city traffic engineer shall use reasonable judgment as to whether the demand criteria would likely be met without the restriction or prohibition.

4. Such additional criteria may be applied as the City Council may deem and identify as reasonably related to the designation of such districts.

The streets, and portions of streets, designated as preferential parking districts are illustrated in Figure 4.10-2 and described below:

- *District A*—Linden Avenue between Bixby Road and Carson Street; Roosevelt Road between Long Beach Boulevard and the alley west of Atlantic Avenue
- *District B*—Ultimo Avenue between Sixth Street and Seventh Street
- *District C*—West side of California Avenue between Armando Drive and Roosevelt Road

- *District D*—Granada Avenue between Anaheim Street and Pacific Coast Highway
- *District E*—Zona Court between Fourth Street and Fifth Street
- *District F*—Village Road between Blackthorne Avenue and Faculty Avenue; Greenmeadow Road between Faculty Avenue and a point feet east of Village Road; Sunfield Avenue between Harvey Way and Centralia Street; Whitewood Avenue between Harvey Way and Centralia Street; Clark Avenue between Carson Street and Centralia Street; Greenbrier Road between Carson Street and Harvey Way; Harvey Way between Greenbrier Road and Blackthorne Avenue; Warwood Road between Faculty Avenue and Blackthorne Avenue; Faculty Avenue between Carson Street and Centralia Street; Graywood Avenue between Harvey Way and Centralia Street
- *District G*—Vuelta Grande Avenue between Snowden Avenue and Benmore Street, Benmore Street between Snowden Avenue and Vuelta Grande Avenue, Wentworth Street between Senasac Street and Snowden Avenue, Senasac Avenue between Belen Street and Wentworth Street, Snowden Avenue between Spring Street and the Los Cerritos Channel, the Spring Street service road between Snowden Avenue and its terminus west of Snowden Avenue, Belen Street between Snowden Avenue and Senasac Avenue, and Birkdale Street between Snowden Avenue and its terminus west of Snowden Avenue
- *District H*—Elm Avenue between Thirty-First Street and the San Diego Freeway
- *District I*—Iroquois Avenue between Deleon Street and Rendina Street; Hackett Avenue between Anaheim Road and El Roble Street; Deleon Street from Palo Verde Avenue to the cul-de-sac; Josie Avenue between Deleon Street and Rendina Street; Espanita Street between Josie Avenue and the end of Espanita Street approximately 750 feet east of Josie Avenue; El Jardin Street between Hackett Avenue and Knoxville Avenue; Mantova Street between Hackett Avenue and Knoxville Avenue; Knoxville Avenue between El Jardin Street and Mantova Street; El Roble Street between Hackett Avenue and Iroquois Avenue
- *District J*—Campo Walk between Riviera Walk and Campo Drive; Riviera Walk between Tivoli Drive and Garibaldi Lane; Tivoli Drive between St. Irmo Walk and Riviera Walk
- *District K*—Randolph Place between Virginia Road and the alley west of Long Beach Boulevard
- *District L*—Elm Avenue from Twenty-Seventh Street 120 feet south to the cul-de-sac
- *District M*—Eighteenth Place from Ocean Boulevard south to its terminus
- *District N*—The 4200 block of Pepperwood Avenue between Village Road and Harvey Way
- *District O*—The east side of the 1800 block of Palo Verde Avenue between Marita Street and the alley north of Atherton Street

- *District P*—Sixth Street between Silvera Avenue and a point 150 feet west of Margo Avenue; Parima Street from Margo Avenue to the easterly terminus; Lausinda Avenue from Parima Street to the northwest terminus; Monita Street between Margo Avenue and Peralta Avenue; Margo Avenue between Sixth Street and Vista Street; Daroca Avenue from Margo Avenue to a point 460 feet southwest of Margo Avenue; Vista Street between Daroca Avenue and Palo Verde Avenue; Fifth Street between Margo Avenue and Silvera Avenue; Laurinda Avenue between Fifth Street and Vista Street; Linares Avenue between Fifth Street and Vista Street; Peralta Avenue between Monita Street and Vita Street; Silvera Avenue between Fifth Street and Vista Street; the west side of Silvera Avenue between Seventh Street and Fifth Street; Vermont Street from Silvera Avenue to the easterly terminus; Colorado Street from Silvera Avenue to the easterly terminus; Eliot Street from Silvera Avenue to the easterly terminus; Mariquita Street from Silvera Avenue to the easterly terminus; and the south side of Fifth Street from Silvera Avenue to the easterly terminus
- *District Q*—The east side of Locust Avenue between Willow Street and Twenty-Seventh Street
- *District R*—Both sides of McNab Avenue between Atherton Street and Marita Street; both sides of Conquista Avenue between Atherton Street and Dayman Street; both sides of Fanwood Avenue between Atherton Street and Marita Street; north side of Dayman Street from Conquista Avenue to a point 262 feet west of Carfax Avenue and the south side of Dayman Street between Conquista Avenue and Tevis Avenue
- *District S*—South side of Wilton Street from Termino Avenue east to the end of the cul-de-sac and the north side of Wilton Street from the east end of the cul-de-sac to a point 100 feet west of the east end of the cul-de-sac
- *District T*—Both sides of Prospect Avenue, from Tenth Street to a point 300 feet north of Tenth Street
- *District U*—North side of Thirty-Sixth Street from the alley west of Cherry Avenue to Gardenia Avenue and the south side of Thirty-Sixth Street from Gardenia Avenue to Cherry Avenue; and both sides of Gardenia Avenue, from Thirty-Sixth Street to the alley north of Wardlow Road
- *District V*—Granada Avenue between Anaheim Street and Pacific Coast Highway; both sides of Anaheim Place and Russell Drive between Pacific Coast Highway and Fourteenth Street; both sides of Park Avenue between Pacific Coast Highway and Anaheim Street; Roycroft Avenue between Anaheim Street and Fifteenth Street; south side of Fifteenth Street between Park Avenue and Roycroft Avenue; both sides of Fifteenth Street between Ximeno Avenue and Roycroft Avenue; both sides of Argonne Avenue between Anaheim Street and Pacific Coast Highway; both sides of Quincy Avenue between Anaheim Street and Fourteenth Street; and both sides of Fourteenth Street between Prospect Avenue and Pacific Coast Highway
- *District W*—Umatilla Avenue between Anaheim Street and Verde Court and Verde Court between Umatilla Avenue and Termino Avenue

- *District X*—South side of Bixby Road between Lime and California Avenues
- *District Y*—West side of Bellflower Boulevard west service road from the alley 245 feet north of Spring Street to Pageantry Street; both sides of Pageantry Street from Bellflower Boulevard east service road to Marber Avenue, and east side of Bellflower Boulevard east service road from Pageantry Street to a point 280 feet north of Pageantry Street
- *District Z*—The east side of Clark Avenue between Atherton Street and Stearns Street, both sides of Greenbrier Road between Atherton Street and Stearns Street, both sides of Bayard Street between Clark Avenue and Greenbrier Road, both sides of Garford Street between Clark Avenue and Fidler Avenue, both sides of Fidler Avenue between Greenbrier Road and Litchfield Avenue, the north side of Atherton Street between Clark Avenue and Greenbrier Road, and both sides of Calderwood Street between Greenbrier Road and Litchfield Avenue

4.10.3 Public Off-Street Parking

Public off-street parking not associated with a City facility (e.g., park, library, etc.) is provided by the City of Long Beach in the downtown area and in the beachfront areas.

In 2001, a study was conducted of existing and future parking needs in downtown Long Beach, in anticipation of changes associated with replacement of the Long Beach Plaza with CityPlace and other ongoing infill development projects. The parking demand in downtown Long Beach was calculated for current conditions and four future scenarios. The scenarios included assumptions regarding new development in downtown, as well as increasing office occupancy rates and utilization/re-use of retail space. The opening of CityPlace is included in all scenarios. The four scenarios that have been assessed are as follows:

- *Future Scenario One*—Occupancy of CityPlace, the Walker Building project and the State Office Building (assumed to occur mid-2002).
- *Future Scenario Two*—Occupancy of CityPlace, the Walker Building project and State Office Building plus occupancy of the D'Orsay Hotel, Insurance Exchange Building project, Broadway Lofts project and development/occupancy of all other currently vacant properties. Office is assumed to have current vacancy rate of 14 percent (assumed to approximately occur in 2003).
- *Future Scenario Three*—Same as Scenario Two, except the office space is assumed to be fully occupied (assumed to occur beyond 2004, depending on retail and office market demand).
- *Future Scenario Four*—Same as Scenario Three, with further increases in retail and restaurant activity assumed as a result of continued success of downtown revitalization (assumed to occur sometime beyond 2006, depending on retail and office market demand).

Peak Parking Demand

For weekdays, the peak demand typically occurs at 2:00 P.M., and is highest between 9:00 A.M. and 4:00 P.M., which reflects the large amount of office space and workers. After 5:00 P.M., the demand is largely made up of restaurant and retail patrons and moviegoers, and the demand slowly drops as the evening progresses.

During weekends, office space usage is minimal and overall parking demand is much lower than during the weekday period. The overall demand is generally steady from 1:00 P.M. to 10:00 P.M. On weekends, there is a large supply of unused parking located in the office buildings; however, many of these buildings are not accessible on weekends.

CityPlace will have a higher parking demand during the peak shopping season in November and December than other times of the year. During a typical July, shoppers only require 75 percent of the December parking demand. During the holiday season, CityPlace parking demand would increase by approximately 345 spaces on a typical weekday and 455 spaces on a weekend.

Parking lots are considered essentially "full" at 90 to 95 percent occupied since it may be difficult for the person searching for parking to know where the few remaining spaces are located. Therefore, a 10 percent contingency factor was built in to all demand calculations.

SCENARIO ONE

The first scenario considers the immediate impacts once CityPlace opens for business. This scenario assumes that the CityPlace retail facilities are open, the Walker Building is complete, the State Office building is leased, and the downtown office vacancy rate remains at 14 percent. The non-peak parking surplus (most of the year except the peak shopping season) is estimated to be 220 spaces on weekdays and 3,645 spaces on weekends. The calculations show that during peak (holiday shopping) weekdays, there will be an approximate deficit of 125 spaces, and an approximate weekend surplus of 3,190 spaces. This demonstrates the impact of the CityPlace parking requirements as compared to conditions when the shopping center was not open.

FUTURE SCENARIO TWO

This scenario assumes the next stage in the development of downtown Long Beach. It continues the development of known projects in the downtown area and assumes that the Scenario One projects are in place (including CityPlace), and the D'Orsay Hotel, Insurance Exchange Building, and Broadway Lofts are all complete and open. The existing vacant storefronts and lots are developed and occupied under this scenario, and the current 14 percent office vacancy rate continues. This analysis shows an approximate peak season parking deficit of 830 spaces during the 2:00 P.M. weekday peak, and a weekend surplus of more than 2,500 spaces. The weekend peak occurs at 2:00 P.M.

FUTURE SCENARIO THREE

This scenario is calculated similarly to Scenario Two, but all office vacancies are assumed to be filled. This amounts to over 190,000 sf of space that was not occupied in the earlier analyses. At this point, there is an estimated peak season deficit of parking in the peak weekday period of 1,625 spaces. During the weekends, the excess is estimated to be 2,400 surplus spaces.

FUTURE SCENARIO FOUR

As the downtown area matures, and all current and proposed projects are built and occupied, incremental changes in parking demand may continue to occur if the downtown is successful. Storefronts that house businesses with a lower parking demand rate may change to a more intense type (e.g., a wig store changes to a Starbucks Coffee). To account for changes such as these, a final analysis was conducted by increasing the assumed demand of the restaurant, bar and retail categories by 15 percent. In addition, future projects that have been proposed, but not fully defined, were added to the long term parking demand scenario. This includes the site of the old YMCA (northeast corner of Long Beach Boulevard and 6th Street), which has been considered to be developed as a retail development.

During the peak season, the analysis shows a weekday peak demand at 2:00 P.M., with an estimated parking deficit of approximately 1,860 spaces. The weekend analysis shows a peak demand at 2:00 P.M., with an approximate 2,170-space surplus. Weekend demand is fairly constant between 1:00 P.M. and 8:00 P.M.

Summary of Parking Needs

As the presently planned projects are completed, and growth continues, the parking supply surplus will diminish during peak weekday periods, and there will be a future deficit of parking on weekdays. The weekday will be the critical time period, as excess parking will be available on weekends due to the low office weekend demand. Weekday peaks typically occur during the early afternoon periods, reflecting the impacts of office space and its associated demand. With over 1.7 million square feet of office space, a large weekday demand is created, but conversely this gives the area a sizeable potential parking supply for the evenings and weekends.

Current Parking Management Programs Already in Place

The City currently has parking management operational strategies that help the efficient use of current parking. These include the following:

- *Pine Square Parking Validation Program*—This program helps to ensure that convenient, short-term parking is available to serve the downtown patrons.
- *Parking Management Plan In-Lieu Parking Fees*—This program helps assist small-scale new development and rehabilitation of existing buildings by allowing

an in-lieu fee paid to the RDA, which will then provide off-site parking or other programs on behalf of the projects.

- *Parking Meters*—Parking meters are located on-street and are typically 24-minute, 2-hour, or 4-hour meters.
- *Valet Parking*—Along Pine Avenue between 1st Street and 3rd Street, a valet parking system is operated by the local merchants.

The Pine Square Parking Validation program offers patrons up to 2 hours of free parking at designated lots and garages when visiting the more than 100 participating retailers or restaurants, and up to 3.5 hours with an AMC Theater validation.

The bright orange  shown on Figure 4.10-3 is designed to easily identify validated parking in the Downtown area. There are four parking structures and three parking lot locations with nearly 5,300 validated parking spaces to serve you for shopping, business, and entertainment.

Additional Parking Management Strategies

ADD PARKING

The analysis indicates that the downtown area is projected to have a parking surplus most of the year, but a potential deficit under future Scenario Two during the peak shopping season, assuming a 95 percent occupancy rate. At that time, an estimated 385 new spaces will be required during the peak season. Under Scenario Three, the deficit would grow to 1,085 spaces during the peak season. Based on this analysis, it is recommended that the City begin planning for the addition of new parking in downtown.

There are two primary methods to add parking in downtown Long Beach. One option is to build new public parking lots or structures in or near the study area. The second option is to add parking within new private development projects as they occur. Under this option, the City would work with developers to replace any parking lost as part of their development and to provide code-required parking to serve their development. As appropriate, the City would also work with developers to provide additional parking over and above their code requirement to help serve the other businesses downtown (with potential assistance with financing).

OTHER RECOMMENDED OPERATIONAL STRATEGIES

Many operational strategies can be considered to help make the existing and future parking supply more efficient. These include the following:

- *Extend meter time limits in the Downtown area to 8:00 or 9:00 P.M.*—The time limit for many of the parking meters expires at 6:00 P.M. in the Downtown area, and there is no incentive for turnover of these metered spaces. Employees may use these spaces, tying up convenient parking for the area in the evenings. The extension of the time limit to 8:00 or 9:00 P.M. would provide incentive for turnover, and open up some of the spaces for commercial use such as for

restaurant patrons that begin to arrive around 6:00 to 7:00 P.M. An 8:00 P.M. or later time limit is common in many commercial areas.

- *Modify meter time limits to most effectively utilize spaces*—Parking meters in the downtown area have time limits as long as four hours. These meters may be used by employees who use these spaces all day long and keep "feeding" the meters. A 2- or 3-hour maximum on the meters (with effective enforcement) would provide incentives for turnover of the spaces within the Downtown area. Parking for longer durations would still be accommodated throughout the area through the existing parking lots. The existing 24-minute spaces should be reviewed to ensure reasonable access for commercial visitors.

- *Increase meter fees*—Current parking meter fees are $0.50/hour. This relatively low cost (compared to other successful downtown areas in Southern California) encourages meter feeding, and staying beyond the intended time limits. Many other Downtown areas have a minimum $1.00/hour parking fee at meters. At $1.00/hour, meter costs would still be less than most parking lot fees and less than valet parking. It is not expected that a $1.00/hour fee would deter customers.

- *Work with (private) non-RDA parking providers to supply employee parking*—Many current business employees in the downtown Long Beach area park at no cost in the Plaza garages. When CityPlace opens, this parking will have a fee, and much will be used for patron parking. Hundreds of employees will be displaced and will need to find replacement parking. This will require reasonably priced parking alternatives for these employees. Currently, some office towers that are not fully leased have excess parking available, and many of the private surface lots have available parking.

- *Work with new developments to provide additional parking beyond code requirement*—As the development continues in the Downtown area, new parking will be constructed along with new development projects. All projects should replace parking displaced by the development, as well as supply code required parking for project itself. As appropriate, the City should work with developers to add additional parking within their projects.

- *Improved signage*—Recommendations for signage and marketing are intended to update what is already in place. Better locational parking signage will alert drivers as they approach public parking lots, and reduce confusion. An MTA grant has been approved at the staff level for improved signage.

- *Create visitor parking information guide/map*—Marketing efforts should be made to help visitors locate convenient parking. This may be in the form of advertisements, maps, and guides. Many cities and Downtown districts have created user-friendly maps and parking guides that are oriented toward the Downtown visitor. The guide would include clear maps showing all public parking, as well as information regarding the validation program and rates.

- *Peak season remote parking with shuttle*—Due to the impacts of CityPlace, the demand for parking will be highest during the peak shopping season in November and December. A short-term solution would be the implementation of remote

parking with a shuttle for downtown employees during the peak season. This is common in many retail areas.

- *Conduct regular monitoring of parking*—This study has revealed a potential future parking deficit in downtown. Since these are only estimates, it will be critical to actually measure and monitor parking usage over time, especially as CityPlace opens. This will also help determine if CityPlace has excess parking that may be used by other businesses.
- *Centralize parking oversight within City*—Currently, the City of Long Beach has a decentralized approach to parking management both in the Downtown area and citywide. Several City departments manage parking. A combination of parking services, including full-time staff to oversee parking operations City wide, would allow a more thorough understanding of the parking demands and needs for employers, employees customers and visitors. In addition, parking policies and programs could be made consistent citywide, and the efficiency of parking operations would increase. Although City staff would have ultimate authority, a private organization could be considered to help run parking programs.

4.10.4 Beach Parking

There are also public parking lots in the Belmont Shore area and in the beach parking lots. There are five publicly owned metered parking lots in the blocks south of Second Street in the Belmont Shore area. They contain a total of 153 parking spaces. There are an additional 366 on-street spaces in the Second Street District and 508 private off-street parking spaces. The District was evaluated in 1999 and it was determined that there is an overall parking shortage of 479 spaces on peak days.

4.10.5 Parking Issues

High-density residential areas experience parking deficiencies because many of the older apartment buildings were built with inadequate off-street parking. Many of the dwelling units are becoming overcrowded as well, which increases the demand for on-street parking. Permit parking has been provided in some of these areas, as well as diagonal parking to increase the supply of on-street parking, but the areas could still use additional parking.

In older commercial areas, such as Second Street and downtown, particularly those areas with older buildings that may not have been constructed with adequate off-street parking, there is a shortage of parking at peak times. The City has attempted to address these parking issues with off-street public parking facilities. Additional public parking may have to be provided to support the reuse of older buildings that cannot provide on-site parking.